

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF GEORGIA  
SAVANNAH DIVISION

UNITED STATES OF AMERICA

Plaintiff,

v.

TRONOX PIGMENTS  
(SAVANNAH) INC.,

Defendant

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No. CV 408-259

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TRONOX PIGMENTS )  
(SAVANNAH) INC., )

Defendant )  
)

**CONSENT DECREE**

WHEREAS, Plaintiff, the United States of America ("the United States"), on behalf of the United States Environmental Protection Agency ("EPA"), filed a complaint ("Complaint") on December 19, 2008, alleging that Defendant Tronox Pigments (Savannah) Inc. ("Tronox") violated the following statutes, and implementing regulations, at its Savannah, Georgia facility (the "Facility"): the Clean Air Act ("CAA"), 42 U.S.C. § 7401 et seq.; the Clean Water Act ("CWA"), 33 U.S.C. § 1251 et seq.; the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq.; and Section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, ("CERCLA"), 42 U.S.C. § 9603(a) (collectively "the Acts");

WHEREAS, Tronox (formerly known as Kerr-McGee Pigments (Savannah) Inc.) acquired the Facility in April 2000;

WHEREAS, subsequent to Tronox's acquisition of the Facility, EPA and the Georgia Environmental Protection Division ("EPD") have performed joint compliance evaluation

inspections of the Facility, including without limitation, on July 11-12, 2000, January 23-26, 2006, and November 1, 2006, and have issued reports of such inspections;

WHEREAS, EPA and/or EPD have issued notices of violation and requests for information concerning the compliance status of the Facility, including without limitation, notices of violation dated April 24, 2008 and August 15, 2008, a request for information pursuant to Section 114 of the CAA, 42 U.S.C. § 7414, by correspondence dated April 4, 2000, a request for information pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, by correspondence dated May 3, 2006, and a request for information pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, by correspondence dated March 14, 2007;

WHEREAS, the allegations in the Complaint are based in part upon the compliance evaluation inspections of the Facility conducted by EPA and/or EPD and the EPA and/or EPD notices of violation and information requests;

WHEREAS, on January 12, 2009, Tronox and its parent company and several other subsidiaries filed petitions for relief under Chapter 11 of the United States Code, jointly administered under Case No. 09-10156 (ALG) (collectively the "Bankruptcy Case"), which includes Case No. 09-10168 (ALG);

WHEREAS, operations at the Facility were significantly curtailed in March 2009 and in July 2009 the Titanium Dioxide Chloride Manufacturing Process was brought down to a cold idle;

WHEREAS, on October 23, 2009, Tronox filed an Answer to the Complaint;

WHEREAS, by agreeing to entry of this Consent Decree, Tronox makes no admission of law or fact with respect to any of the allegations set forth in the Consent Decree or the Complaint and denies any violations alleged therein;

WHEREAS, the purpose of this Consent Decree is to ensure compliance with applicable environmental laws and regulations and resolve alleged violations at the Tronox facility;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and entry of this Consent Decree without further litigation is reasonable, and in the public interest;

WHEREAS, the United States and Tronox have consented to entry of this Consent Decree without trial of any issue;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, below, and with the consent of the Parties, IT IS HEREBY ORDERED, ADJUDGED AND DECREED as follows:

#### I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties, pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) of the CWA, 33 U.S.C. § 1319(b); Section 3008(a) of RCRA, 42 U.S.C. § 6928(a); Section 109(c) of CERCLA, 42 U.S.C. § 9609(c); and 28 U.S.C. §§ 1331, 1345, and 1355.

2. Venue is proper in the Southern District of Georgia pursuant to 28 U.S.C. §§ 1391 and 1395, 42 U.S.C. § 7413(b), 42 U.S.C. § 6928(a) and (g), 33 U.S.C. §§ 1319(b) and 1321(b), and 42 U.S.C. §§ 9609(c) and 9613(b) because Tronox resides in this district and the claims arose in this district.

3. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2); and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), notice of the commencement of this action has been given to the State.

4. The Complaint states claims upon which relief may be granted against Tronox.

5. Tronox consents to and shall not challenge entry of this Consent Decree nor shall Tronox challenge this Court's jurisdiction to enter, enforce, modify, or terminate this Consent Decree.

## II. APPLICABILITY

6. Upon entry, the provisions of this Consent Decree shall apply to and be binding upon the United States and Tronox and any successors or assigns. The Parties acknowledge that the provisions of this Consent Decree may be affected or modified by a plan of reorganization confirmed by the United States Bankruptcy Court for the Southern District of New York, including certain ancillary written agreements between the Parties incorporated into such a confirmed plan (collectively a "Reorganization Plan"); provided, however, that the relief granted in this Consent Decree may only be modified by a Reorganization Plan with the express consent of the United States.

7. Subject to a Reorganization Plan, as set forth in Paragraph 6, no transfer of ownership or operation of the Facility subject to this Consent Decree, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Tronox of its obligation to ensure that the terms of the Decree are implemented. At least thirty (30) days prior to such transfer, Tronox shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer to the United States, together with a copy of the proposed written agreement, in accordance with the provisions of this Consent Decree regarding notice. Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Decree. No delegation of any obligations under this Consent Decree to any transferee may occur without a written modification of this Consent Decree approved by the Parties and the Court.

8. In any action to enforce this Consent Decree, Tronox shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

### III. DEFINITIONS

9. Except as otherwise expressly provided in this Consent Decree, definitions for the terms presented herein shall be incorporated from the CAA, CWA, RCRA and CERCLA and their implementing regulations. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

“Area of Concern” or “AOC” for the purposes of this Consent Decree shall include any area having a probable release of a hazardous waste, hazardous constituent, or hazardous waste constituent which is not from a Solid Waste Management Unit and is determined by a RCRA Facility Assessment to pose a current or potential threat to human health or the environment.

“Best Management Practices” or “BMPs” shall mean schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the United States and the State of Georgia. BMPs also include treatment requirements, operating procedures and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“Chlorinator Brick Pile Area” shall mean the area of the Facility where chlorinator bricks were placed on the ground, as identified in the September 14, 2006, report on the EPA/EPD January 23-26, 2006 RCRA Compliance Evaluation Inspection of the Facility.

“Complaint” shall mean the Complaint filed by the United States in this action.

"Consent Decree" or "Decree" shall mean this Consent Decree and all Appendices attached hereto. In the event of any conflict between this Consent Decree and any Appendix, the text of this Consent Decree shall control.

"EPD Consent Order" or "EPD Order" shall mean the Consent Order entered into between the State of Georgia, Department of Natural Resources, Environmental Protection Division, and Kerr-McGee Pigments (Savannah) Inc., Order No. EPD-HW-1484, on June 19, 2002.

"Day" shall mean a calendar day unless expressly stated to be a business day. "Business day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of the next business day.

"Defendant" shall mean Tronox Pigments (Savannah) Inc.

"Effective Date" shall be the date entry of this Consent Decree by the Court.

"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"EPD" shall mean the State of Georgia, Department of Natural Resources, Environmental Protection Division, and any successor departments or agencies of the State of Georgia.

"Facility" shall mean the titanium dioxide plant, the gypsum plant and all contiguous property owned and operated by Tronox in Savannah, Georgia at One Kerr McGee Road.

"Georgia" or the "State" shall mean the State of Georgia.

"Georgia Air Quality Act" shall mean the Georgia Air Quality Act, O.C.G.A. § 12-9-1, et seq., and its implementing regulations, the Georgia Rules for Air Quality Control, GA. COMP. R. & REGS Chap.391-3-1 .



**"Georgia Hazardous Waste Management Act"** shall mean the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq., and its implementing regulations, the Georgia Rules for Hazardous Waste Management, GA. COMP. R. & REGS. Chap. 391-3-11.

**"Georgia Water Quality Control Act"** shall mean the Georgia Water Quality Control Act, O.C.G.A. § 12-5-20, et seq., and its implementing regulations, the Georgia Rules for Water Quality Control, GA. COMP. R. & REGS. Chap. 391-3-6.

**"Georgia SIP"** shall mean the State Implementation Plan for the State of Georgia approved by EPA pursuant to the CAA.

**"Interest"** shall mean the statutory rate applicable to judgments, 28 U.S.C. § 1961.

**"Month"** shall mean the calendar month.

**"Notify and submit"** and other terms signifying an obligation to transmit or communicate documents and information mean to deliver in person, by email, regular mail or express courier not later than the day that such transmission or communication is required by this Consent Decree.

**"Paragraph"** shall mean a portion of this Consent Decree identified by an Arabic number or an upper case letter.

**"Parties"** shall mean the United States of America and Tronox, and **"Party"** shall mean any one of the named **"Parties."**

**"Permitting Authority"** shall mean the federal or state authority from which Tronox is required to obtain permits, licenses, or approvals.

**"Plaintiff"** shall mean the United States of America.

**"Section"** shall mean a portion of this Consent Decree identified by a Roman numeral.

**“Solid Waste Management Unit” or “SWMU” for the purposes of this Consent Decree includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank (including storage, treatment, and accumulation tanks), container storage unit, wastewater treatment unit, including all conveyances and appurtenances used in waste management or storm water handling, elementary neutralization unit, transfer station, or recycling unit from which hazardous waste or hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous waste.**

**“Storm Water Permit” shall mean the State of Georgia General Permit No. GAR00000000 (Authorization to Discharge Under the National Pollutant Discharge Elimination System Storm Water Discharges Associated with Industrial Activity) effective August 1, 2006 and which expires July 31, 2011, and subsequent re-issuance as applicable.**

**“Storm Water Pollution Prevention Plan” or “SWPPP” shall mean a plan for controlling pollutants in storm water discharges that meets Storm Water Requirements.**

**“Storm Water Requirements” shall mean the terms and conditions of this Decree and the Storm Water Permit, and the laws and regulations that apply, interpret or enforce the Storm Water Permit, in their current form or as any of the foregoing requirements may be amended in the future.**

**“Submittal” shall include any work plan, report, progress report, or any other written document Tronox is required by this Consent Decree to send to EPA.**

**“Third Party” shall mean a party who is neither a parent nor a subsidiary of Tronox and does not share a common parent or subsidiary with Tronox.**

**“Titanium Dioxide Chloride Manufacturing Process” shall mean operation of the chlorination and oxidation units at the Facility.**

"Title V Permit" shall mean the permit required by or issued pursuant to the requirements of Subchapter V of the CAA, 42 U.S.C. §§ 7661 – 7661e.

"Tronox" shall mean Tronox Pigments (Savannah) Inc.

"United States" shall mean the United States of America, acting on behalf of EPA.

"Washout Building Sump Area" shall mean the area of the Facility associated with a release from the Washout Building Sump, as identified in the September 14, 2006, report on the EPA/EPD January 23-26, 2006 RCRA Compliance Evaluation Inspection of the Facility.

#### IV. CIVIL PENALTY

10. In settlement and satisfaction of the claims set forth in Paragraph 71, the civil penalty assessed against Tronox shall be fixed in the amount of Four Million Two Hundred Thousand Dollars (\$4,200,000).

11. The civil penalty amount set forth in Paragraph 10 shall be treated as an Environmental Claim, as such term is defined in Tronox's plan term sheet (attached to Dkt. No. 1003), and shall be deemed allowed and shall receive treatment in Tronox's Reorganization Plan as an Environmental Claim; provided such Reorganization Plan is confirmed. If such Reorganization Plan is not confirmed, the civil penalty shall be allowed as a prepetition general unsecured claim in the Bankruptcy Case in favor of the United States and, subject to the terms of any other Reorganization Plan, such claim shall be treated in the same manner as other general unsecured claims and shall not be subjected to discrimination or subordination.

12. Except as provided in this Consent Decree, Tronox shall not propose any plan of reorganization or take any other action in the Bankruptcy Case that is inconsistent with the terms or provisions of this Consent Decree. Plaintiff shall not oppose any term or provision of a plan of reorganization filed by Tronox that is addressed by and consistent with this Consent Decree.

The Parties reserve all other rights and defenses they may have with respect to any plan of reorganization filed by Tronox.

13. All cash payments made to the United States pursuant to this Section shall be made by FedWire Electronic Funds Transfer (AEFT®) to the U.S. Department of Justice in accordance with written instructions to be provided to Tronox, following lodging of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney's Office for the Southern District of Georgia. At the time of payment, Tronox shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et al. v. Tronox Pigments (Savannah) Inc., and shall reference the civil action number and DOJ No. 90-5-2-1-09052 to the United States in accordance with Section XIV of this Decree (Notices) and to:

US Environmental Protection Agency  
Fines and Penalties  
Cincinnati Finance Center  
PO Box 979077  
St. Louis, MO 63197-9000

14. The instructions from the Financial Litigation Unit of the U.S. Attorney's Office for the Southern District of Georgia United States, however, may designate that a portion of the cash payments made to the United States pursuant to this Section shall be paid into the Oil Spill Liability Trust Fund pursuant to 26 U.S.C. 9509.

15. Tronox agrees that it will not deduct any payments made pursuant to this Section for the purposes of federal or state taxes.

#### V. PROJECT COORDINATOR

16. The Parties designate the following individuals to act as Project Coordinators to monitor the progress of the activities required under this Consent Decree, to communicate informally concerning problems which have arisen or which are anticipated in the

implementation of this Consent Decree and to coordinate communications between Tronox and

EPA:

As to EPA:  
Ronald J. Mikulak  
U.S. Environmental Protection Agency  
Region 4  
Atlanta Federal Center  
61 Forsyth Street SW  
Atlanta, Georgia 30303

As to Tronox:

Phillip Rowland  
Plant Manager  
Tronox Pigments (Savannah), Inc.  
1 Kerr-McGee Road  
P.O. Box 368  
Savannah, GA 31402

- a. Such coordination and informal communication by the Project

Coordinators shall not relieve the Parties of any notice and reporting requirements set forth elsewhere in this Decree and its attachments.

- b. The United States and Tronox shall each have the unilateral right to change their respective Project Coordinator. Such a change does not require approval of the Court and shall be accomplished by notifying the other Project Coordinator of the change in writing at least seven (7) calendar days prior to the effective date of the change. The absence of the EPA Project Coordinator or the Tronox Project Coordinator shall not be cause for the stoppage of work.

#### VI. SUBMITTAL AND PERMIT PROCEDURES

17. All documents submitted to EPA for approval under this Consent Decree shall be submitted pursuant to Section XV (Notices). If the submission is approved by EPA, the approval shall be incorporated into this Consent Decree and Tronox shall take all actions required by the

plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is disapproved in whole or in part, Tronox shall (i) upon written direction of EPA take all actions required by the approved plan, report, or other document that EPA determines are technically severable from any disapproved portions, subject to Tronox's right to dispute only the specified conditions or the disapproved portions, under the dispute resolution provisions of this Consent Decree, and (ii) within thirty (30) days or such other time as the Parties agree to in writing, either revise the disapproved portion of the submission and resubmit the plan, report, or other document for approval or invoke dispute resolution.

18. Any stipulated penalties applicable to the original submission, as provided in Section IX of this Decree (Stipulated Penalties), shall accrue during the thirty (30)-day or other cure period specified in Paragraph 17, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Tronox's obligations under this Decree, as determined by EPA, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

19. Permits. Where any compliance obligation under Section VII requires Tronox to obtain a federal or state permit or approval, Tronox shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Tronox may seek relief under the provisions of Section X of this Consent Decree (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Tronox has submitted

timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

20. Applications Requesting Incorporation of Consent Decree Requirements Into Permits. In accordance with Section VII.A. of the Consent Decree, Tronox shall submit appropriate applications to EPD requesting incorporation of the specific requirements of Section VII.A. into a federally enforceable permit that will ensure that the requirements survive the termination of this Consent Decree. Following submission of the appropriate applications, Tronox will cooperate with EPD by promptly submitting all information that EPD seeks following its receipt of the application materials. Tronox does not waive its right to appeal more stringent emission limits or standards than those required by this Consent Decree.

#### VII. INJUNCTIVE RELIEF

21. Subject to a Reorganization Plan, as set forth in Paragraph 6 above, Tronox shall implement the requirements of this Section VII as specified herein.

##### A. CLEAN AIR ACT

22. Within ninety days (90) of the Effective Date for this Consent Decree, or within ninety (90) days before Titanium Dioxide Chloride Manufacturing Process operations resume, whichever is later, Tronox shall file an application with EPD for a Title V permit that will include the following proposed emissions limits to replace the performance standards set forth in Condition Nos. 3.2.4 and 3.2.5 of Title V permit # 2816-051-0008-V-04-0:

- a. Carbon monoxide (CO): 892 tons/year
- b. Carbonyl sulfide (COS): 57 tons/year
- c. Sulfur Dioxide (SO<sub>2</sub>): 118 tons/year

These emissions limits are based on achieving at least 94% on-stream efficiency for each control train in the waste gas handling system (WGHS) and shall represent the maximum tons per year

of CO, COS and SO<sub>2</sub> that may be emitted on a rolling twelve-month basis from the chlorinator WGHS control trains 1 and 2, the bypass vent, and the standby thermal oxidizer (STO) combined. The Title V permit application shall also include monitoring and recordkeeping sufficient to determine compliance with the proposed emission limits including the requirements specified in Paragraphs 24 - 33 *infra*

23. Tronox shall comply with the emission limits set forth in Paragraph 22 upon the Effective Date of this Consent Decree or upon the resumption of Titanium Dioxide Chloride Manufacturing Process operations, if no such operations are occurring upon the Effective Date. Tronox shall continue to comply with such emissions limits until an amended Title V permit containing such emissions limits has been issued. However, if the amended Title V permit is subsequently amended before termination of the Consent Decree so that such emissions limits are no longer contained in the permit, such emissions limits shall remain independently enforceable under the Consent Decree until termination of the Consent Decree.

24. If Titanium Dioxide Chloride Manufacturing Process operations resume, Tronox shall calibrate, maintain and operate flow meters at the following locations along the WGHS to continuously measure and record waste gas flow rates:

- a. Control train 1 and 2 waste gas lines feeding the respective Dynawave scrubbers.
- b. Control train 1 and 2 waste gas lines feeding the respective incinerators.
- c. Control train 1 and 2 nitrogen lines feeding the respective pre-heaters.

Flow meters previously installed at any of the above referenced locations shall be sufficient to satisfy the requirements of this paragraph as long as each existing flow meter is calibrated,



maintained and operated in accordance with the terms of this Consent Decree and applicable Georgia rules.

25. If Titanium Dioxide Chloride Manufacturing Process operations resume, Tronox shall calibrate, maintain and operate monitoring systems at the WGHS control train 1 and 2 waste gas lines feeding the respective Dynawave scrubbers to continuously measure and record the amount of CO and carbon dioxide (CO<sub>2</sub>) in the waste gas stream. CO/ CO<sub>2</sub> monitoring systems previously installed at any of the above-referenced locations shall be sufficient to satisfy the requirements of this paragraph as long as each existing CO/ CO<sub>2</sub> monitoring system is calibrated, maintained and operated in accordance with the terms of this Consent Decree and applicable Georgia rules.

26. CO/CO<sub>2</sub> monitors shall be calibrated in accordance with applicable Georgia rules.

27. If Titanium Dioxide Chloride Manufacturing Process operations resume, Tronox shall record the daily amount of time in hours and minutes over which waste gases are routed to each of the control trains, the bypass vent and the STO.

28. If Titanium Dioxide Chloride Manufacturing Process operations resume, for each day on which waste gases are routed to the bypass vent, daily emissions of CO associated with bypass vent operation shall be calculated as follows:

$$CO_D = \sum_{i=1}^n \frac{(WGF_i)(CO_i)(BV_i) \left( 60 \frac{\text{min}}{\text{hr}} \right) \left( 28 \frac{\text{lbsCO}}{\text{lb-mole}} \right)}{(100) \left( 385.3 \frac{\text{ft}^3}{\text{lb-mole}} \right)}, \text{ where:}$$

$CO_D$  = Emissions of CO from use of the bypass vent (lbs/day);

$WGF_i$  = Hourly average waste gas flow rate measured and calculated in accordance with Appendix A;

- $CO_i$  = Hourly average % CO in the waste gas measured by the appropriate CO monitoring system;
- $BV_i$  = Bypass time for a given hour, represented as the decimal fraction of the hour during which the bypass vent was actually used, and calculated by dividing the number of minutes of bypass time during the hour by 60 minutes (a value of 1 will be used for a complete hour of bypass); and
- $n$  = The daily number of hours over which the bypass vent is used

29. If Titanium Dioxide Chloride Manufacturing Process operations resume, for each day on which waste gases are routed to the bypass vent, daily emissions of COS associated with bypass vent operations shall be calculated as follows:

$$COS_D = \sum_{i=1}^n (COS_i)(BV_i), \text{ where:}$$

- $COS_D$  = Emissions of COS from use of the bypass vent (lbs/day);
- $BV_i$  = Bypass time for a given hour, represented as the decimal fraction of the hour during which the bypass vent was actually used, and calculated by dividing the number of minutes of bypass time during the hour by 60 minutes (a value of 1 will be used for a complete hour of bypass);
- $n$  = The daily number of hours over which the bypass vent is used; and
- $COS_i$  = Hourly mass of COS in the waste gas (lbs/hr), calculated from:
- $$COS_i = \frac{(TC_i)(S)\left(60 \frac{\text{lbsCOS}}{\text{lb-mole}}\right)}{(100-S)\left(32 \frac{\text{lbsS}}{\text{lb-mole}}\right)}, \text{ where:}$$
- $S$  = Monthly average % sulfur in the coke feed as determined by the certificates of analysis of all coke cars unloaded in the month; and

$$TC_i = \frac{(WGF_i)(CO_i + CO_{2i}) \left( 60 \frac{\text{min}}{\text{hr}} \right) \left( 12 \frac{\text{lbsC}}{\text{lb-mole}} \right)}{(100) \left( 385.3 \frac{\text{ft}^3}{\text{lb-mole}} \right)},$$

where:

$$\begin{aligned} WGF_i &= \text{Hourly average waste gas flow rate} \\ &\quad \text{measured and calculated in accordance with} \\ &\quad \text{Appendix A;} \\ CO_i &= \text{Hourly average \% CO in the waste gas} \\ &\quad \text{measured by the appropriate CO monitoring} \\ &\quad \text{system;} \\ CO_{2i} &= \text{Hourly average \% CO}_2 \text{ in the waste gas} \\ &\quad \text{measured by the appropriate CO}_2 \\ &\quad \text{monitoring system;} \end{aligned}$$

30. If Titanium Dioxide Chloride Manufacturing Process operations resume, for each day on which waste gases are routed to the STO, daily emissions of SO<sub>2</sub> associated with STO operation shall be calculated as follows:

$$SO_{2D} = \sum_{i=1}^n \frac{(COS_i)(STO_i) \left( 64 \frac{\text{lbsSO}_2}{\text{lb-mole}} \right)}{\left( 60 \frac{\text{lbsCOS}}{\text{lb-mole}} \right)}, \text{ where:}$$

$$\begin{aligned} SO_{2D} &= \text{Emissions of SO}_2 \text{ from use of the STO} \\ &\quad \text{(lbs/day);} \\ COS_i &= \text{Hourly mass of COS in the waste gas} \\ &\quad \text{(lbs/hr), calculated in the same manner as} \\ &\quad \text{for COS emissions in paragraph 29;} \\ STO_i &= \text{STO usage time for a given hour,} \\ &\quad \text{represented as the decimal fraction of the} \\ &\quad \text{hour during which the STO was actually} \\ &\quad \text{used, and calculated by dividing the number} \\ &\quad \text{of minutes of STO usage time during the} \end{aligned}$$

$n =$

hour by 60 minutes (a value of 1 will be used for a complete hour of STO usage);  
The daily number of hours over which the STO is used

31. If Titanium Dioxide Chloride Manufacturing Process operations resume, for each day on which waste gases are routed to the incinerators, daily emissions of CO, COS and SO<sub>2</sub> shall be based on the most recent stack test data gas composition and the measured gas flow as determined by the flow meters described in Paragraph 24 of this Consent Decree.

32. If Titanium Dioxide Chloride Manufacturing Process operations resume, during periods of monitoring system downtime, Tronox shall use the average of the CO, CO<sub>2</sub> and flow meter readings obtained from the most recent previous twenty-four (24) hours of monitoring data to calculate daily emissions of CO, COS and SO<sub>2</sub> as applicable.

33. Although hourly average measurements are specified above for various values, Tronox may elect to use more frequent monitoring intervals for calculating emissions of CO, COS, and SO<sub>2</sub>.

34. The Title V permit application also shall include for informational purposes a copy of the Facility preventive maintenance plan and opportunistic maintenance protocol for the WGHS. Tronox agrees to inclusion of a condition in any new Title V permit that is issued after the Effective Date for the Facility which requires: (1) compliance with the approved preventive maintenance plan and opportunistic maintenance protocol; (2) notification to EPD of any changes to the preventive maintenance plan and opportunistic maintenance protocol; and (3) maintenance of records documenting any changes to the preventive maintenance plan and opportunistic maintenance protocol.

35. Tronox shall provide written notice of the permanent shutdown of operations at its Facility to EPA, Region 4. For the purposes of this Paragraph, permanent shutdown shall mean

that Tronox has surrendered the air permits for the Facility. Upon submission of notice of the permanent shutdown of the Facility, the requirements of Section VII.A., with the exception of this Paragraph, shall not apply to the Facility.

**B. RCRA**

36. Tronox is subject to the requirements of Consent Order No. EPD-HW-1484 (the "EPD Consent Order"), entered into by Tronox and EPD on June 19, 2002, pursuant to the Georgia Hazardous Waste Management Act and RCRA.

37. Within sixty (60) days of the Effective Date, Tronox shall amend the Part A application previously submitted to EPD on July 19, 2002, pursuant to the EPD Consent Order. The amended Part A application shall identify the Chlorinator Brick Pile Area and the Washout Building Sump Area as regulated hazardous waste management units, in addition to the Ditch System previously identified in the EPD Consent Order.

38. Within one hundred twenty (120) days of the Effective Date, Tronox shall submit for approval to EPD a Closure Plan for the Chlorinator Brick Pile Area and the Washout Building Sump Area pursuant to and in accordance with Condition 3 of the EPD Consent Order.

39. Tronox shall undertake corrective action for all Solid Waste Management Units and Areas of Concern at the Facility, either:

- a. under a post-closure permit issued by EPD, if Clean Closure of the Facility Ditch System, Chlorinator Brick Pile Area, and the Washout Building Sump Area cannot be demonstrated in accordance with the terms of the EPD Consent Order, or;
- b. under a Corrective Action Consent Order or a Corrective Action Permit issued by EPD, if Clean Closure of the Facility Ditch System, Chlorinator Brick Pile Area, and the Washout Building Sump Area is completed as determined by EPD in accordance with the terms of the EPD Consent Order,.

40. Tronox shall provide financial assurance in accordance with the EPD Consent Order. Tronox shall provide financial assurance for all corrective action activities under the post closure permit or the Corrective Action Permit or Order, as required therein. The financial assurance shall conform to the Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action, September 30, 2003, available at <http://www.epa.gov/compliance/resources/policies/cleanup/rcra/interim-fin-assur-cor-act.pdf>, and shall conform to requirements at Section 391-3-11-.05 of the GA Rules of Hazardous Waste Management, which incorporates Subpart H of 40 CFR Part 264 and 265 by reference.

41. Tronox's failure to complete or implement any of the requirements of this Section shall be subject to stipulated penalties pursuant to Section IX of the Consent Decree (Stipulated Penalties).

42. The provisions of this Section shall terminate on the date a post closure permit, Corrective Action Permit or Order is issued by EPD.

#### C. CLEAN WATER ACT

43. Sediment Mitigation Plan. Tronox shall have completed the storm water management controls and measures specified in Appendix B, attached hereto and incorporated herein by reference, in accordance with the terms and schedules set forth therein.

44. Best Management Practices. Within one hundred fifty (150) days of the Effective Date, Tronox shall develop and submit to EPA, as part of a modified SWPPP, any additional Best Management Practices ("BMPs") that are installed in order to comply with the State of Georgia Storm Water Permit for the Facility, including but not limited to BMPs installed in order to comply with the requirements of Appendix B.

45. SPCC. Within sixty (60) days of the Effective Date, Tronox shall revise its SPCC Plan as necessary to conform with the regulations at 40 C.F.R. Part 112. The SPCC Plan shall be

certified by a professional engineer. A copy of the certified SPCC Plan shall be submitted to EPA for review no later than thirty (30) days after it has been certified. With sixty (60) days after the Effective Date, Tronox also shall have completed an evaluation of the secondary containment of all tanks and containers located at the Facility that are currently in use.

#### **VIII. REPORTING REQUIREMENTS**

46. Within thirty (30) days after the end of each half-calendar year (i.e., by July 30 and January 30) after the Effective Date and until termination of this Consent Decree, and subject to a Reorganization Plan, as set forth in Paragraph 6, Tronox shall submit to EPA a semi-annual report for the preceding six months that shall include, but not be limited to, the status of any construction or compliance measures; completion of milestones; problems encountered or anticipated, together with implemented or proposed solutions; status of permit applications; operation and maintenance; and reports to state agencies pertaining to compliance with this Consent Decree. If Tronox violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Tronox shall notify the United States of such violation and its likely duration, in writing, within ten (10) working days of the day Tronox first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Tronox shall so state in the report. Tronox shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) days of the day Tronox becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Tronox of its obligation to provide the notice required by Section X of this Consent Decree (Force Majeure).

47. Whenever any violation of this Consent Decree or any other event affecting Tronox's performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Tronox shall notify EPA orally or by electronic or facsimile transmission as soon as possible, but no later than twenty-four (24) hours after Tronox knows of, or should know of, the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

48. All reports under this section shall be submitted to the persons designated in Section XV of this Consent Decree (Notices).

49. Each report submitted by Tronox under this Section shall be signed by an official of Tronox and shall include the following certification:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all Appendices and that this document and its Appendices were prepared either by me personally or under my direction or supervision in a manner designed to ensure that qualified and knowledgeable personnel properly gather and present the information contained therein. I further certify, based on my personal knowledge or on my inquiry of those individuals immediately responsible for obtaining the information, that the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowingly and willfully submitting a materially false statement.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

50. The reporting requirements of this Consent Decree do not relieve Tronox of any reporting obligations required by the Acts, or their implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.



51. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

#### **IX. STIPULATED PENALTIES**

52. Subject to a Reorganization Plan, as set forth in Paragraph 6:

a. Tronox shall be liable for Stipulated Penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section X (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any Appendix, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

b. Subject to the Force Majeure provisions of this Consent Decree, Tronox shall be liable for stipulated penalties for failure to comply with the terms and conditions of this Consent Decree as follows:

c. For failure to pay the civil penalties and any accrued Interest pursuant to this Consent Decree: \$1500 for each day of failure to comply.

d. For failure to comply with any requirements of Section VI or Section VII set forth in this Consent Decree:

<u>Penalty Per Day/ Per Violation</u>	<u>Number of Days</u>
\$1,000	1 through 30
\$2,000	31 through 60
\$3,000	each day beyond 60.

e. All stipulated penalties shall begin to accrue on the day after the performance is due or on the day a violation occurs, whichever is applicable, and shall

continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree. Penalties shall accrue as provided in Paragraphs 52 c. and d. regardless of whether EPA has notified Tronox of a violation. Tronox shall pay any stipulated penalty within thirty (30) days of receiving the United States' written demand.

f. The United States may, in the unreviewable exercise of its discretion, reduce or waive Stipulated Penalties otherwise due under this Consent Decree.

g. Stipulated Penalties shall continue to accrue as provided in Paragraphs 52.c. and d., above, during any Dispute Resolution, but need not be paid until the following:

1) If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Tronox shall pay accrued penalties determined to be owing, together with interest, to the United States within thirty (30) days of the later of the effective date or the receipt of EPA's agreement or decision.

2) If the dispute is appealed to the Court and the United States prevails in whole or in part, Tronox shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty (60) days of receiving the Court's decision; except as provided in Subparagraph 3).

3) If the Court's decision is appealed by a Party, Tronox shall, within thirty (30) days after receipt of the final appellate court decision, pay all accrued stipulated penalties determined to be owed, together with accrued interest.

h. Tronox shall, as directed by the United States in its demand, pay Stipulated Penalties owing to the United States by EFT in accordance with Section IV,

Paragraph 13, above to the office of the United States Attorney, Southern District of Georgia, Attention: Financial Litigation Unit.

i. A copy of the transaction record and any correspondence from Tronox to the United States Attorney shall be sent to the EPA Project Coordinator.

j. Tronox shall not deduct Stipulated Penalties paid under this Section in calculating its federal or State income tax.

k. Should Tronox fail to pay stipulated penalties according to the terms of this Consent Decree, Tronox shall be liable for interest on such penalties, as provided for in 28 U.S.C. 1961, accruing as of the date payment became due.

l. Subject to the provisions of Section XIII of this Consent Decree (Effect of Settlement/Reservation of Rights), the Stipulated Penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Tronox's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of relevant statutory or regulatory requirements, Tronox shall be allowed a credit, for any Stipulated Penalties paid, against any statutory penalties imposed for such violation that exceed the stipulated penalties.

m. The payment of stipulated penalties shall not alter in any way Tronox's obligation to complete the performance of the actions described in this Consent Decree or in other applicable federal or state statutes or regulations.

#### **X. FORCE MAJEURE**

53 For the purposes of this Consent Decree, a "Force Majeure Event" shall mean any event beyond the control of Tronox, its contractors, or any other entity controlled by, or working for Tronox that delays the performance of any obligation under this Consent Decree despite Tronox's best efforts to fulfill the obligation. "Best efforts" include anticipating any potential

force majeure event and addressing the effects of any such event (a) as it is occurring and (b) after it has occurred, to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Tronox's financial inability to perform any obligation under this Consent Decree.

54 Tronox shall provide notice orally or by electronic or facsimile transmission as soon as possible, but not later than seventy-two (72) hours after the time Tronox first knew of, or by the exercise of due diligence, should have known of, a claimed force majeure event. Tronox shall also provide written notice, as provided in Section XV of this Consent Decree (Notices), within seven (7) days of the time Tronox first knew of, or by the exercise of due diligence, should have known of, the event. The notice shall state the anticipated duration of any delay; its cause(s); Tronox's past and proposed actions to prevent or minimize any delay; a schedule for carrying out those actions; and Tronox's rationale for attributing any delay to a force majeure event. Tronox shall adopt all reasonable measures to avoid or minimize such delays. Failure by Tronox to give notice as required by this Paragraph shall render this Section voidable by the United States as to the specific event for which this Section was invoked.

55. The United States shall notify Tronox in writing of its decision regarding Tronox's claim of Force Majeure within thirty (30) business days of receipt of the notice provided under the above Paragraph. If the United States agrees that a force majeure event has occurred, the United States shall agree to extend the time for Tronox to perform the affected requirements for the time necessary to complete those obligations. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other obligation. Where the United States agrees to an extension of time, the appropriate modification shall be made pursuant to Section XVIII of this Consent Decree

(Modification). Tronox shall not be liable for stipulated penalties for the periods of the delay. However, Tronox shall be liable for stipulated penalties in accordance with this Consent Decree for its failure thereafter to complete the work in accordance with the extended or modified schedule.

56. If the United States does not agree that a force majeure event has occurred, or does not agree to the extension of time sought by Tronox, the United States' position shall be binding, unless Tronox invokes Dispute Resolution under this Consent Decree.

57. In any dispute regarding force majeure, Tronox shall bear the burden of proving that any delay in performance or any other violation of any requirement of this Consent Decree was caused by or will be caused by a force majeure event. Tronox shall also bear the burden of proving that Tronox gave the notice required by this Section and the burden of proving the anticipated duration and extent of any delay(s) attributable to a force majeure event.

58. Unanticipated or increased costs or expenses associated with the performance of Tronox's obligations under this Consent Decree shall not constitute a force majeure event. However, any delay in the performance of a compliance obligation resulting from the failure of a Permitting Authority to issue a necessary permit or permit modification in a timely fashion shall qualify as a force majeure event, if Tronox has submitted a timely and complete application and has taken all other actions necessary to obtain such permit or permit modification, including without limitation, submitting to the Permitting Authority all relevant and available information requested by such authority.

#### **XI. DISPUTE RESOLUTION**

59. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Tronox's failure to seek resolution of a dispute

under this Section shall preclude Tronox from raising any such issue as a defense to an action by the United States to enforce any obligation of Tronox arising under this Decree.

60. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Tronox sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed thirty (30) days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within thirty (30) days after the conclusion of the informal negotiation period, Tronox invokes formal dispute resolution procedures as set forth below.

61. Formal Dispute Resolution. Tronox shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting Tronox's position and any supporting documentation relied upon by Tronox.

62. The United States shall serve its Statement of Position within forty-five (45) days of receipt of Tronox's Statement of Position. The United States' Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Tronox, unless Tronox files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Tronox may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XV of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within thirty (30) days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph, or if the United States does not serve a Statement of Position, within sixty (60) days of the serving of Tronox's Statement of Position. The motion shall contain a written statement of Tronox's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

64. The United States may respond to Tronox's motion within the time period allowed by the Local Rules of this Court. Tronox may file a reply memorandum, to the extent permitted by the Local Rules.

65. In any dispute brought under Paragraph 63, Tronox shall bear the burden of demonstrating that its position clearly complies with this Consent Decree. The United States reserves the right to argue that this matter is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law.

66. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Tronox under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated Penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided above. If Tronox does not prevail on the disputed issue, Stipulated Penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

**XII. INFORMATION COLLECTION AND RETENTION**

67. During the term of this Consent Decree, any authorized representative of the United States, upon presentation of credentials, shall be given access at all reasonable times to the facility, and to any other property owned or under the control of Tronox to which access is required for implementation of this Consent Decree, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States by Tronox in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Tronox or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Tronox's compliance with this Consent Decree.

68. Until five (5) years after the termination of this Consent Decree, Tronox shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Tronox's performance of its obligations under this Consent Decree. Drafts of final documents and non-substantive correspondence and e-mails do not need to be retained. This information- retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information- retention period, the United States may request copies of any documents, records, or other information required to be maintained under this Paragraph.



69. At the conclusion of the information retention period provided in the preceding Paragraph, Tronox shall notify the United States at least ninety (90) days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Tronox shall deliver any such documents, records, or other information to EPA. Tronox may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Tronox asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Tronox. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

70. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Tronox to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

### XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

71. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint and filed in this action and for violations alleged in notices of violation and compliance evaluation inspection reports issued by the United States to Tronox or its predecessors prior to the December 19, 2008.

72. Except as specifically provided herein, the United States does not waive any rights or remedies available to it for violation by Tronox of federal or state laws or regulations. This Consent Decree shall in no way affect the United States' ability to bring future actions for any claims not alleged in the Complaint in this case or for claims subject to an express reservation. This Consent Decree does not relieve Tronox of any criminal liability.

73. This Consent Decree in no way affects Tronox's responsibilities to comply with all federal, state, or local laws and regulations.

74. This Consent Decree does not limit or affect the rights of Tronox or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not parties to this Consent Decree, against Tronox, except as otherwise provided by law. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

75. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the Acts or their implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 71. The United States further reserves all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Tronox's Facility, whether related to the violations addressed in this Consent Decree or otherwise.

76. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Tronox is responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits; and

Tronox's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, nor shall approval of any submission made by Tronox under this Consent Decree constitute a warranty that implementation by Tronox of the approved submission will result in compliance with the provision of the Acts, or with any other provisions of federal, state, or local laws, regulations, or permits. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Tronox's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Acts, or with any other provisions of federal, state, or local laws, regulations, or permits.

#### **XIV. COSTS**

77. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to enforce this Consent Decree or to collect any portion of the civil penalty or any Stipulated Penalties due but not paid by Tronox.

#### **XV. NOTICES**

78. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

**As to the United States of America:**

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
Box 7611 Ben Franklin Station  
Washington, D.C. 20044-7611  
Re: DOJ No. 90-5-2-1-09052

if by regular mail or post office express mail, and to

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division

U.S. Department of Justice  
601 D Street, N.W., 2nd Floor  
Washington, D.C. 20004  
Re: DOJ No. 90-5-2-1-09052

if by private overnight mail service; and

Ronald J. Mikulak  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303-8960  
(404) 562-9233

As to EPA if notice is only directed to EPA:

Ronald J. Mikulak  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303-8960  
(404) 562-9233

As to Tronox:

Matthew A. Paque  
Legal Department  
Tronox LLC  
P.O. Box 268859  
Oklahoma City, Oklahoma 73126  
(405) 775-5443

and

John H. Johnson Jr.  
Troutman Sanders LLP  
600 Peachtree Street, Suite 5200  
Atlanta, Georgia 30308  
(405) 885-3166

79. Any Party may, by written notice to the other Party, change its designated notice recipient or notice address provided above.

80. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

#### **XVI. EFFECTIVE DATE**

81. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

#### **XVII. RETENTION OF JURISDICTION**

82. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, or effectuating or enforcing compliance with the terms of this Decree; provided, however, that the terms of this Consent Decree may be affected or modified by a Reorganization Plan, as set forth in Paragraph 6 above.

#### **XVIII. MODIFICATION**

83. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by the Parties. Where the modification constitutes a material change to any term of this Decree, it shall be effective only upon approval by the Court. The terms contained in the Appendices of this Decree may be modified upon written agreement of the Parties without Court approval, unless any such modification effects a material change to the terms of this Consent Decree or materially affects the Tronox's ability to meet the requirements or objectives of this decree.

#### **XIX. TERMINATION**

84. After Tronox has achieved compliance with the requirements of this Consent Decree, including those relating to Section VII (Injunctive Relief) and has paid the civil penalty and any accrued Stipulated Penalties as required by this Consent Decree, or, if by virtue of a

Reorganization Plan, as set forth in Paragraph 6 above, the requirements of this Consent Decree are no longer applicable, Tronox may serve upon the United States a Request for Termination of the Consent Decree.

85. Following receipt by the United States of Tronox's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the requirements for termination of this Consent Decree have been met. If the United States agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

86. If the United States does not agree that the Decree may be terminated, Tronox may invoke Dispute Resolution under Section XI of this Decree. However, Tronox shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 61 of Section XI (Dispute Resolution), until sixty (60) days after service of its Request for Termination.

#### XX. PUBLIC PARTICIPATION

87. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree should not be entered. Tronox consents to entry of this Consent Decree without further notice.

#### XXI. SIGNATORIES/SERVICE

88. Each undersigned representative of each party to this Consent Decree certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

89. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

90. Tronox agrees not to oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Tronox in writing that it no longer supports entry of the Decree.

91. Tronox acknowledges that it has accepted service of process with respect to the complaint filed by the United States in the above captioned case.-

#### **XXII. INTEGRATION**

92. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Consent Decree and supersede all prior agreements and understandings, whether oral or written, between the Parties related to the violations alleged in the Complaint. Other than the Appendices, which are attached to and incorporated in this Decree, and deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall they be used in construing the terms of this Consent Decree.

#### **XXIII. FINAL JUDGMENT**

93. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court in the above-captioned matter between the

Parties. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

IT IS SO ORDERED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2010.

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UNITED STATES DISTRICT JUDGE  
Southern District of Georgia



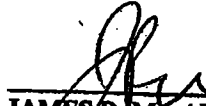
THE UNITED STATES OF AMERICA

Dated: 8/23/10



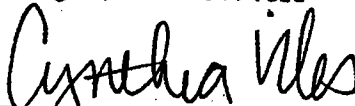
ROBERT G. DREHER  
Acting Assistant Attorney General  
Environment & Natural Resources Division  
United States Department of Justice

Dated: 7/30/10



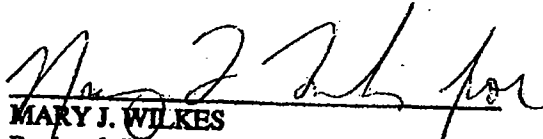
JAMES R. MACAYEAL  
Trial Attorney  
Environmental Enforcement Section  
Environment & Natural Resources Division  
United States Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611

Dated: 7/30/10



CYNTHIA GILES  
Assistant Administrator  
Office of Enforcement and Compliance Assurance  
United States Environmental  
Protection Agency  
Washington, D.C.

Dated: 7/13/10



MARY J. WILKES  
Regional Counsel  
United States Environmental  
Protection Agency, Region 4

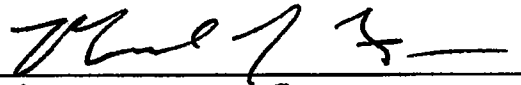
Of Counsel:

JENNIFER M. LEWIS  
Assistant Regional Counsel  
Office of Environmental Accountability  
United States Environmental  
Protection Agency, Region 4  
61 Forsyth Street  
Atlanta, Georgia 30303

TRONOX PIGMENTS (SAVANNAH) INC.

Dated: 5-12-2010

By:

  
Michael J. Foster  
V.P., General Counsel & Secretary

## **APPENDIX A**

### **WASTE GAS FLOW SCENARIOS AND FLOW CALCULATION METHODS**

The following table and diagram describe the methodology that is to be used in determining the waste gas flow rate for the emissions calculations specified by Paragraphs 28 – 30 of this Consent Decree. The emissions calculations described in Paragraphs 28 – 30 require that the waste gas flow rate be quantified for either the bypass vent or the STO. The flow rates at the bypass vent and STO will be determined by comparison of flow rate measurements at the six flow meters described in Paragraph 24 of this Consent Decree. The location of each flow meter within the WGHS is depicted on the diagram below, along with a unique identifying letter (A – F). The flow meters are also identified in the first row of the table with the identifier provided in parenthesis.

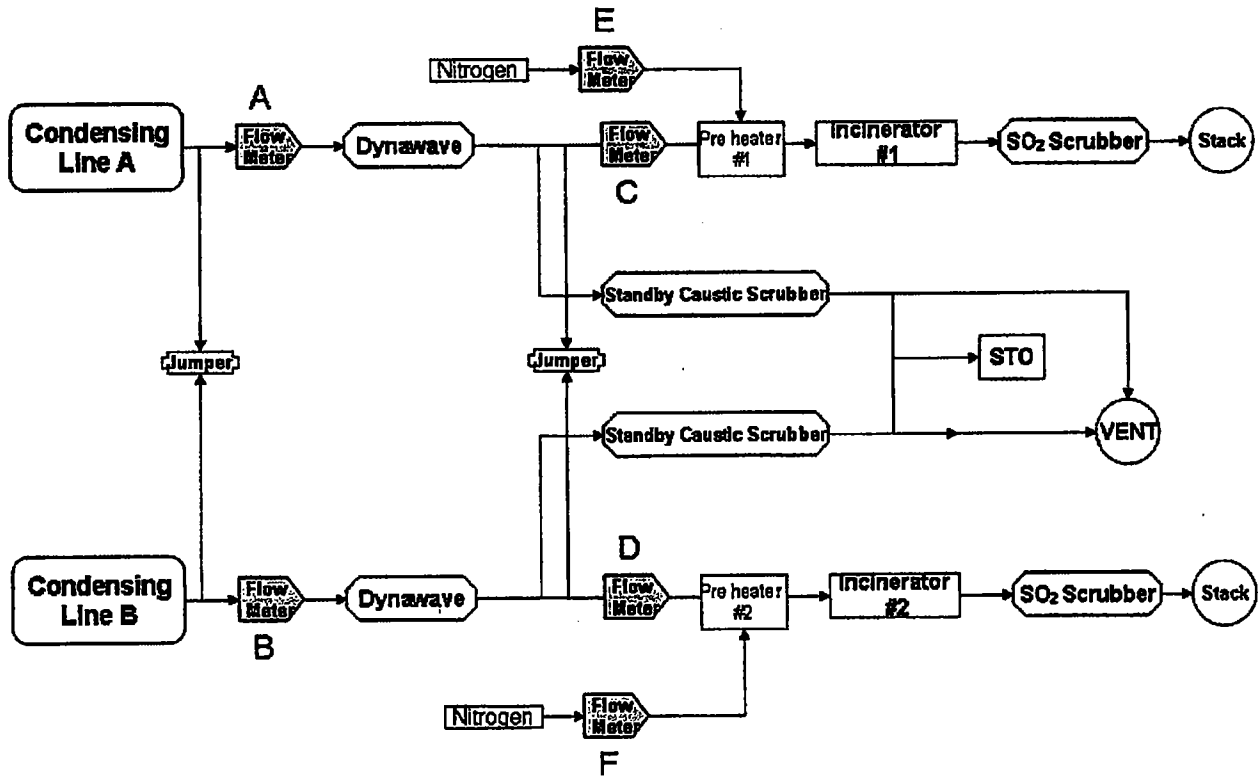
The table provides the methodology for determining the bypass vent or STO flow rate for any of the thirty-two possible WGHS operating scenarios that have been identified. For any operating scenario, the resulting waste gas flow rate at either the bypass vent or the STO is dependent upon the operating mode of each control train and the position of the jumper valve. In order to determine the flow rate at the bypass vent or the STO for any operating scenario, the operating mode for each control train must be identified in the first two columns of the table (T1 Waste Gas & T2 Waste Gas). In addition, the position of the jumper valve is to be compared to the third column (Jumper). The flow rate from control train 1 to the bypass vent is provided by either the numeric value or the formula that is included at the corresponding cell in the fourth column (T1 Vent Flow). Similarly, the flow rate from control train 2 to the bypass vent is found in the fifth column (T2 Vent Flow), while the flow rate from control trains 1 and 2 to the STO are provided by the sixth and seventh columns, respectively (T1 STO Flow & T2 STO Flow).

Therefore, for an example scenario in which the jumper valve is in the closed position, waste gases from control train 1 are being routed to the bypass stack, and waste gases from control train 2 are routed to the STO, the flow rates required for emissions calculations are determined as follows:

1. The flow rate to the bypass vent from control train 1 (T1 Vent Flow) is determined by first subtracting the measured flow at the nitrogen line feeding the control train 1 pre-heater, from the measured flow at the waste gas line feeding the control train 1 incinerator. The resulting quantity is then subtracted from the measured flow at the waste gas line feeding the control train 1 Dynawave scrubber.
2. The flow rate to the bypass vent from control train 2 (T2 Vent Flow) is equal to zero.
3. The flow rate to the STO from control train 1 (T1 STO Flow) is equal to zero.
4. The flow rate to the STO from control train 2 (T2 STO Flow) is determined by first subtracting the measured flow at the nitrogen line feeding the control train 2 pre-heater, from the measured flow at the waste gas line feeding the control train 2 incinerator. The resulting quantity is then subtracted from the measured flow at the waste gas line feeding the control train 2 Dynawave scrubber.

**Waste Gas Flow Calculation Table**

T1 Dynawave Waste Gas Flow (A)	T2 Dynawave Waste Gas Flow (B)	T1 Incinerator Waste Gas Flow (C)	T2 Incinerator Waste Gas Flow (D)	T1 Preheater Nitrogen Flow (E)	T2 Preheater Nitrogen Flow (F)	
T1 Waste Gas	T2 Waste Gas	Jumper	T1 Vent Flow	T2 Vent Flow	T1 STO Flow	T2 STO Flow
Incinerator	Incinerator	Closed	0	0	0	0
Incinerator	STO	Closed	0	0	0	B-(D-F)
Incinerator	Stack	Closed	0	B-(D-F)	0	0
Incinerator	Down	Closed	0	0	0	0
STO	Incinerator	Closed	0	0	A-(C-E)	0
STO	STO	Closed	0	0	A-(C-E)	B-(D-F)
STO	Stack	Closed	0	B-(D-F)	A-(C-E)	0
STO	Down	Closed	0	0	A-(C-E)	0
Stack	Incinerator	Closed	A-(C-E)	0	0	0
Stack	STO	Closed	A-(C-E)	0	0	B-(D-F)
Stack	Stack	Closed	A-(C-E)	B-(D-F)	0	0
Stack	Down	Closed	A-(C-E)	0	0	0
Down	Incinerator	Closed	0	0	0	0
Down	STO	Closed	0	0	0	B-(D-F)
Down	Stack	Closed	0	B-(D-F)	0	0
Down	Down	Closed	0	0	0	0
Incinerator	Incinerator	Open	0	0	0	0
Incinerator	STO	Open	0	0	A-(C-E)	B-(D-F)
Incinerator	Stack	Open	A-(C-E)	B-(D-F)	0	0
Incinerator	Down	Open	0	0	0	0
STO	Incinerator	Open	0	0	A-(C-E)	B-(D-F)
STO	STO	Open	0	0	A-(C-E)	B-(D-F)
STO	Stack	Open	A-(C-E)	B-(D-F)	0	0
STO	Down	Open	0	0	A-(C-E)-(D-F)	0
Stack	Incinerator	Open	A-(C-E)	B-(D-F)	0	0
Stack	STO	Open	A-(C-E)	B-(D-F)	0	0
Stack	Stack	Open	A-(C-E)	B-(D-F)	0	0
Stack	Down	Open	A-(C-E)-(D-F)	0	0	0
Down	Incinerator	Open	0	0	0	0
Down	STO	Open	0	0	0	B-(D-F)-(C-E)
Down	Stack	Open	0	B-(D-F)-(C-E)	0	0
Down	Down	Open	0	0	0	0

**APPENDIX A (Continued)****Waste Gas Handling System Diagram**

## **APPENDIX B**

### **STORM WATER MANAGEMENT CONTROLS AND MEASURES**

1. Within one hundred fifty (150) days of entry of this Consent Decree, Tronox shall have completed the following tasks:

- a. Remove 1,200 to 1,500 cubic yards of gypsum from approximately 2,400 linear feet of ditches within the Gypsum Plant boundaries signified by the blue and green lines in Figure B-1 to an estimated depth of 1 foot, in compliance with the requirements of the SWPPP.
- b. Install and/or repair appropriate BMPs and storm water controls, so as to reduce pollutants in storm water discharges, by completing the following tasks, as identified in Figure B-1: (1) install a berm and overflow basin along the west side of the property; (2) grade and vegetate the access road to the red gypsum storage area; (3) extend the berm and install an overflow basin in the limestone storage area; (4) restore the berm and install a retention pond with overflow between the covered gypsum storage area and the Outfall 010 access road; and (5) install overflow basins at two culverts along the south side of the property.
- c. Upgrade Outfall 010 by reconstructing the existing riser system with improved adjustability and sealing, and eliminate Outfall 011 by installing a culvert connecting the flow to the existing Outfall 010 ditches.
- d. Modify its SWPPP as appropriate to indicate present Facility conditions and new and/or modified BMPs, and submit a copy of the modified SWPPP to EPA.

2. Within ninety (90) days after entry of this Consent Decree, Tronox shall submit a Progress Report to EPA detailing steps it has taken to accomplish the tasks in Number 1 above. Within one hundred eighty (180) days of entry of the Consent Decree, Tronox shall submit to EPA a detailed Final Report on how compliance with the requirements in Number 1 was achieved.

3. For a period of one (1) year after entry of the Consent Decree, Tronox shall (1) inspect and document BMPs, storm water controls, conveyances and outfalls at least once per month consistent with the terms and requirements of Part IV(D)(3)(d)(1) of the State of Georgia General Permit No. GAR000000 ("Storm Water Permit"); (2) perform and document visual examinations of the storm water discharged from each storm water outfall identified in the SWPPP, consistent with the terms and requirements of Part IV(D)(3)(d)(2)-(3) of the Storm Water Permit; and (3) provide quarterly to EPA a copy of inspections and any corrective actions.